

FIG. 1

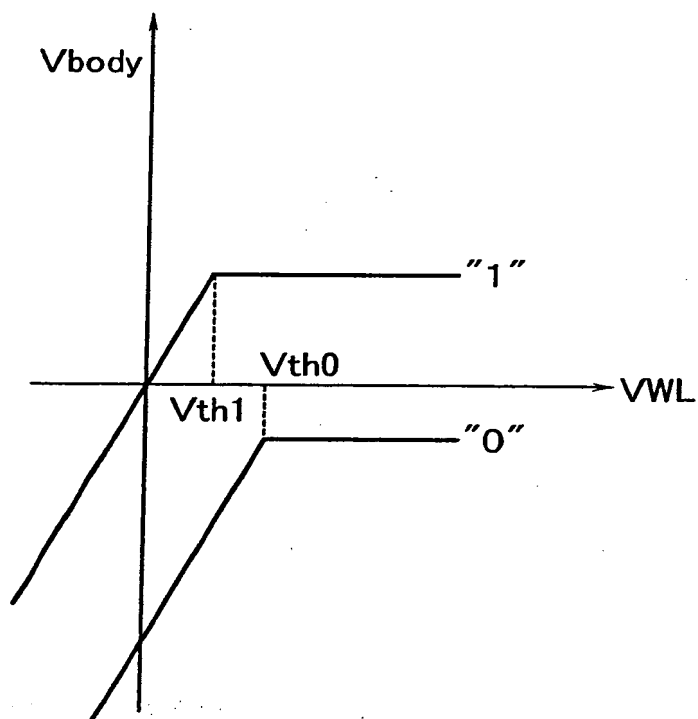


FIG. 2

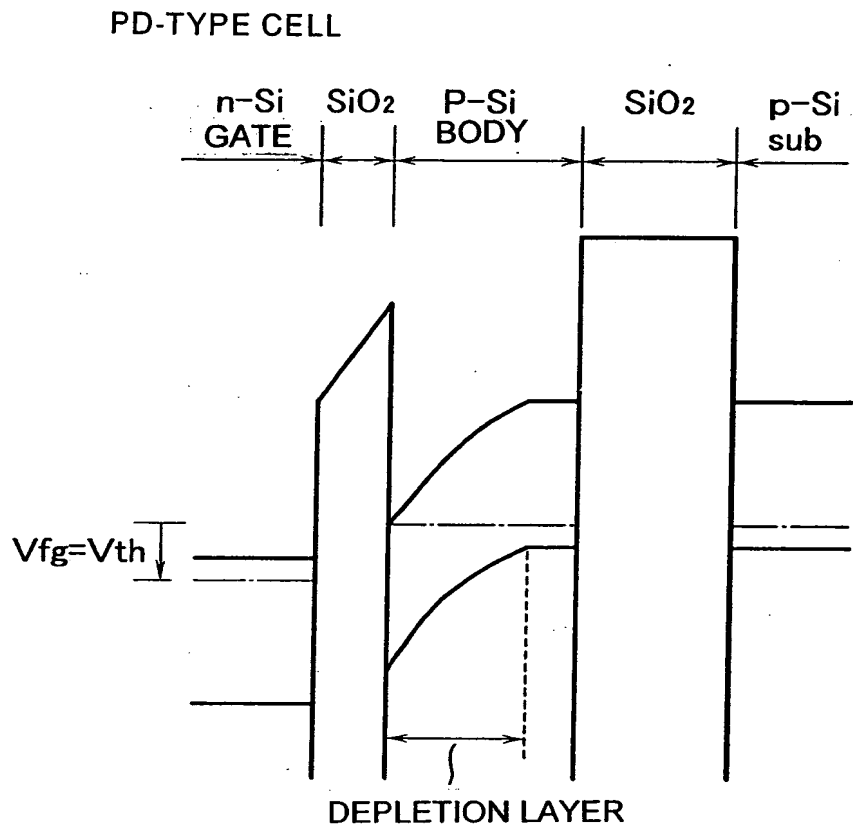


FIG. 3

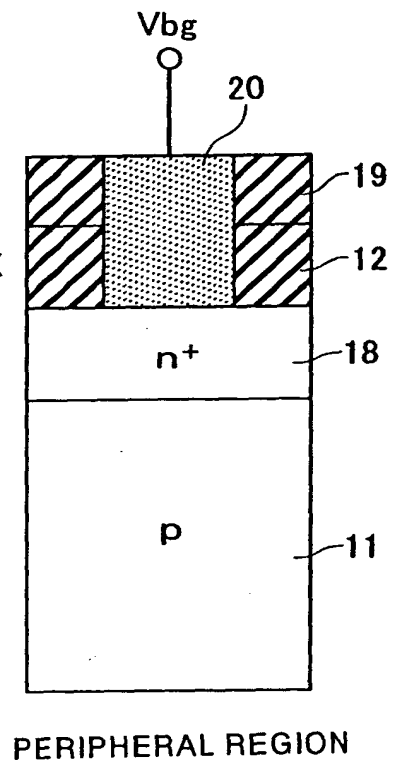
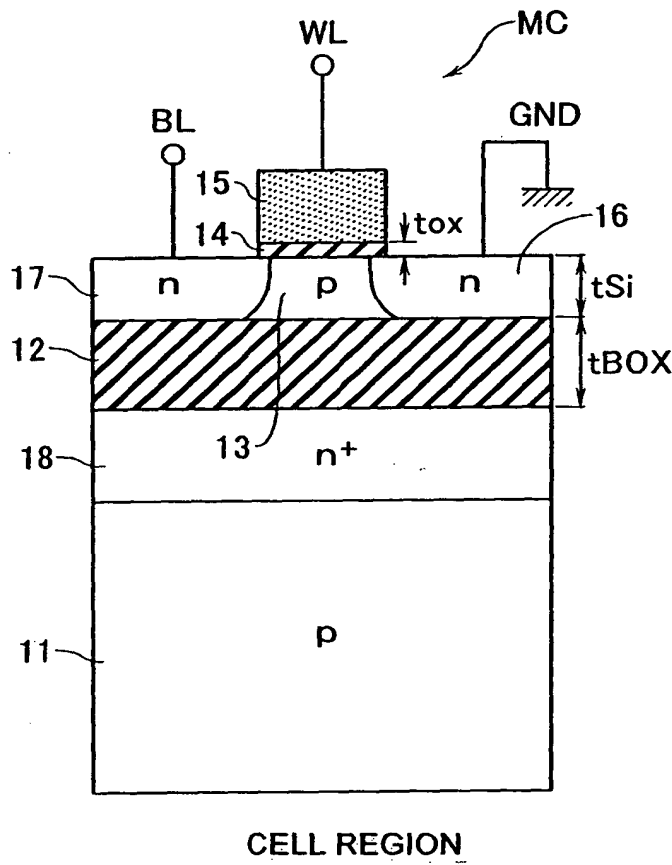


FIG. 4A

FIG. 4B

## FD-TYPE CELL

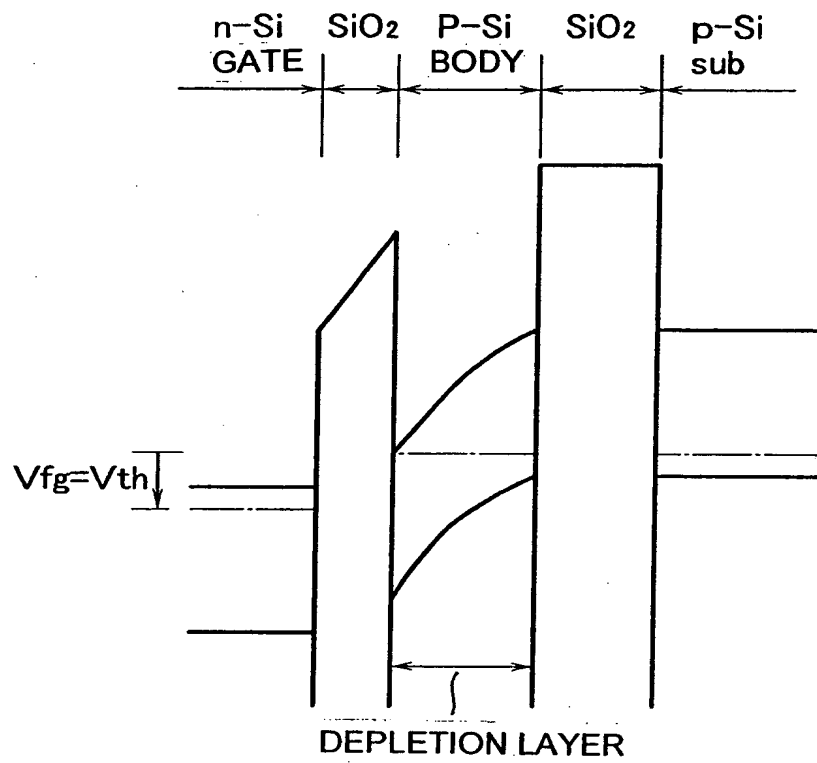


FIG. 5

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"0" STATE OF FD-TYPE CELL

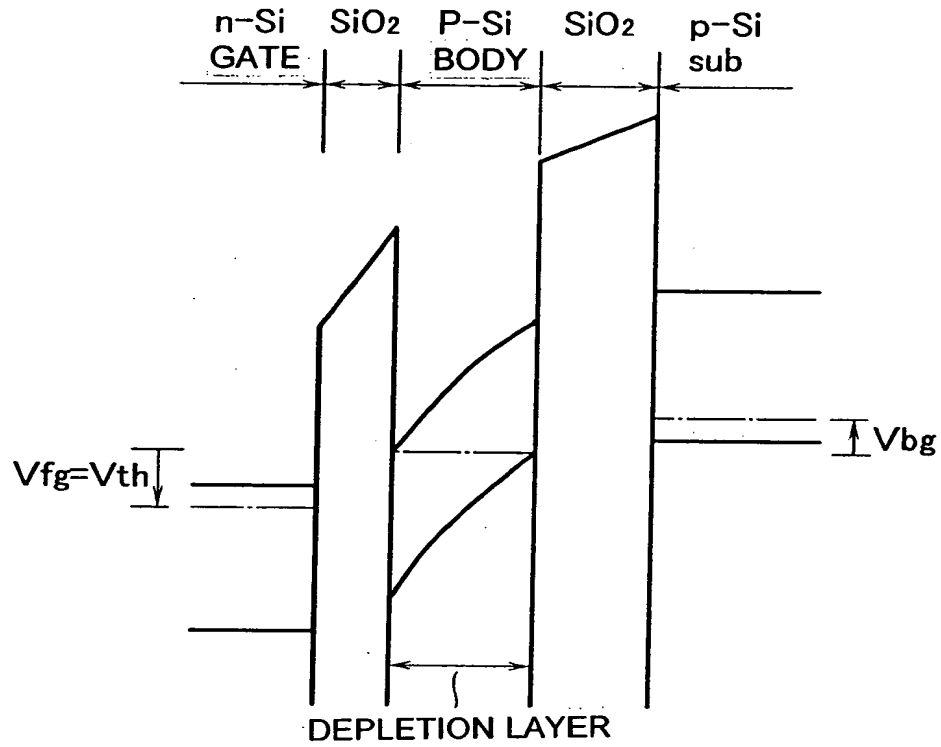


FIG. 6

$t_{ox}=10\text{nm}$ ,  $t_{BOX}=30\text{nm}$ ,  $t_{Si}=25\text{nm}$ ,  $NA=1.0e15\text{cm}^{-3}$

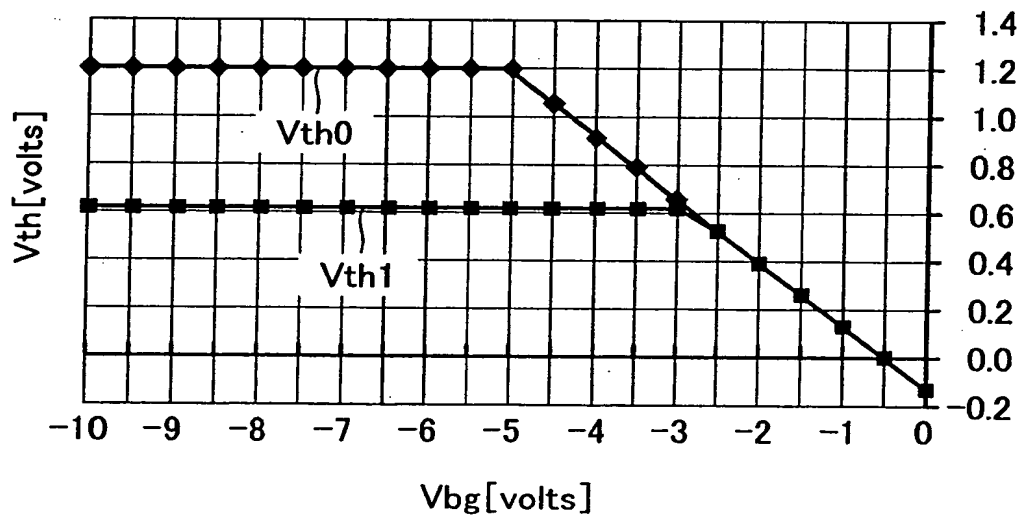


FIG. 7

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"0" write/read

( $t_{ox}=10\text{nm}$ ,  $t_{BOX}=30\text{nm}$ ,  $t_{Si}=25\text{nm}$ ,  
 $V_{bg}=-5\text{V}$ ,  $N_A=1.0\text{e}15\text{cm}^{-3}$ )

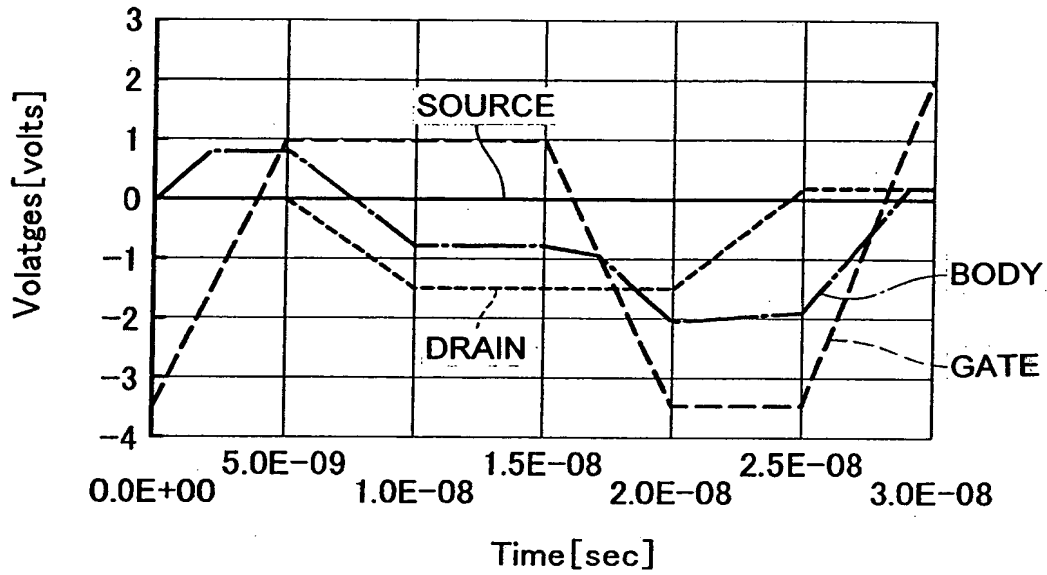


FIG. 8

"1" write/read

( $t_{ox}=10\text{nm}$ ,  $t_{BOX}=30\text{nm}$ ,  $t_{Si}=25\text{nm}$ ,  
 $V_{bg}=-5\text{V}$ ,  $N_A=1.0\text{e}15\text{cm}^{-3}$ )

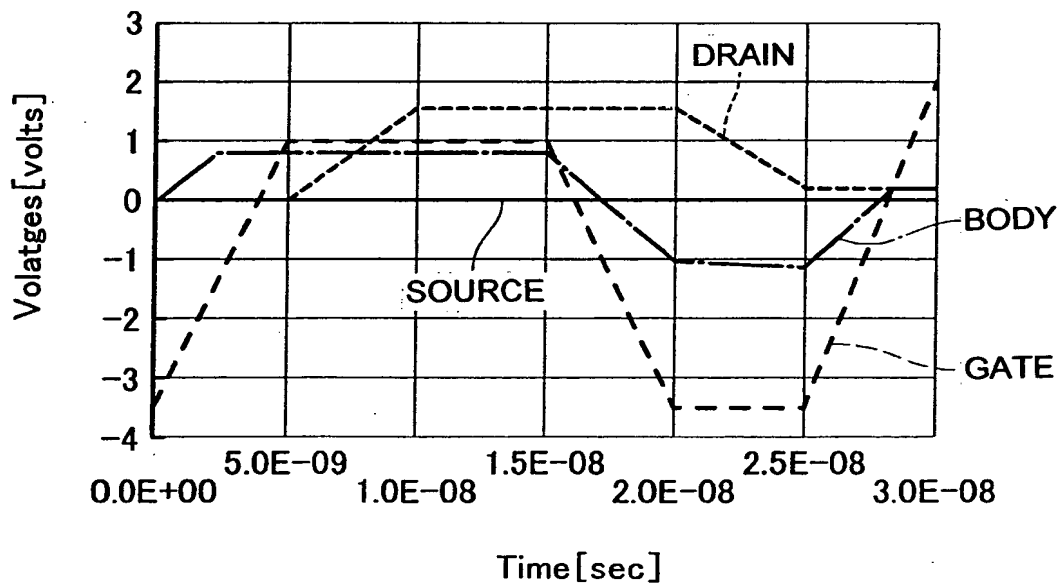


FIG. 9

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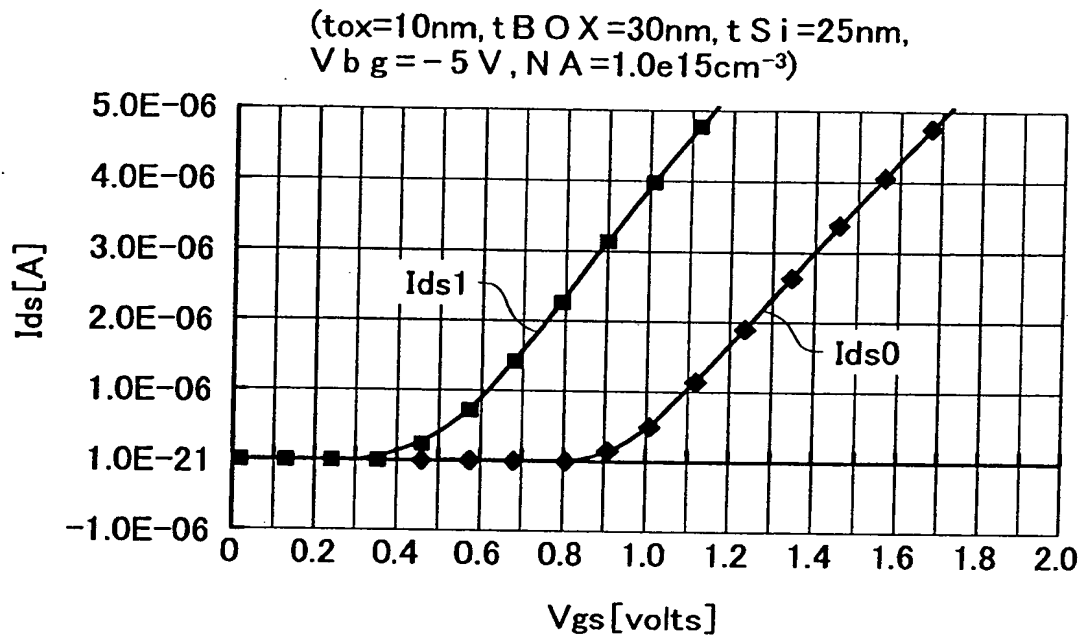


FIG. 10

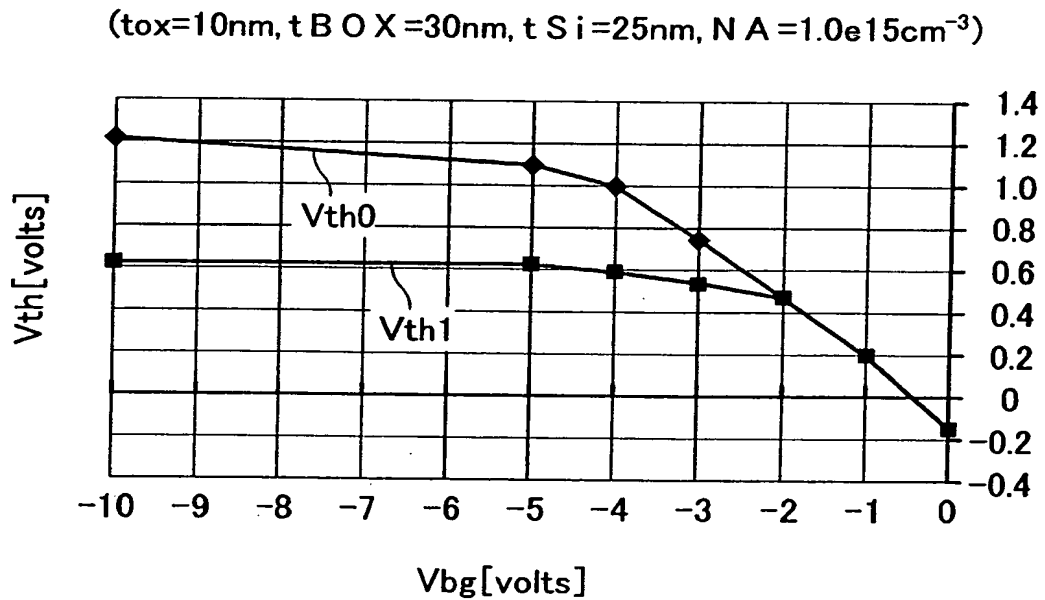


FIG. 11

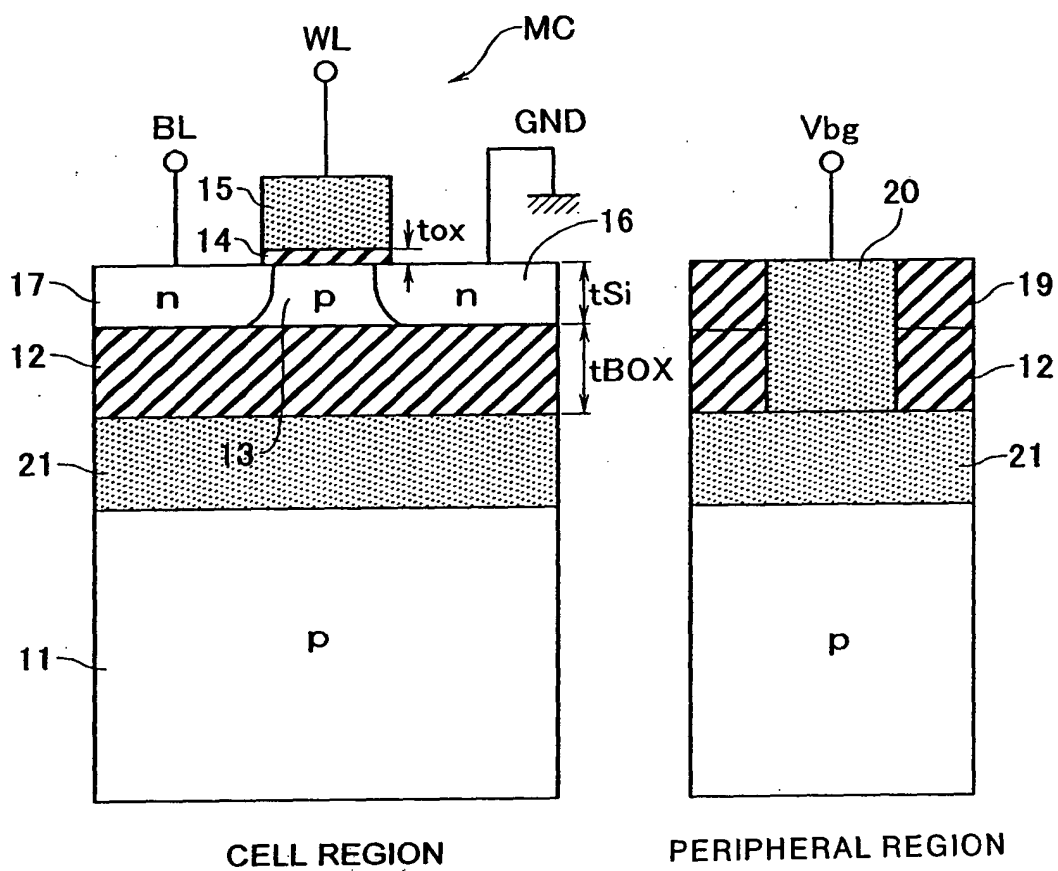


FIG. 12A

FIG. 12B

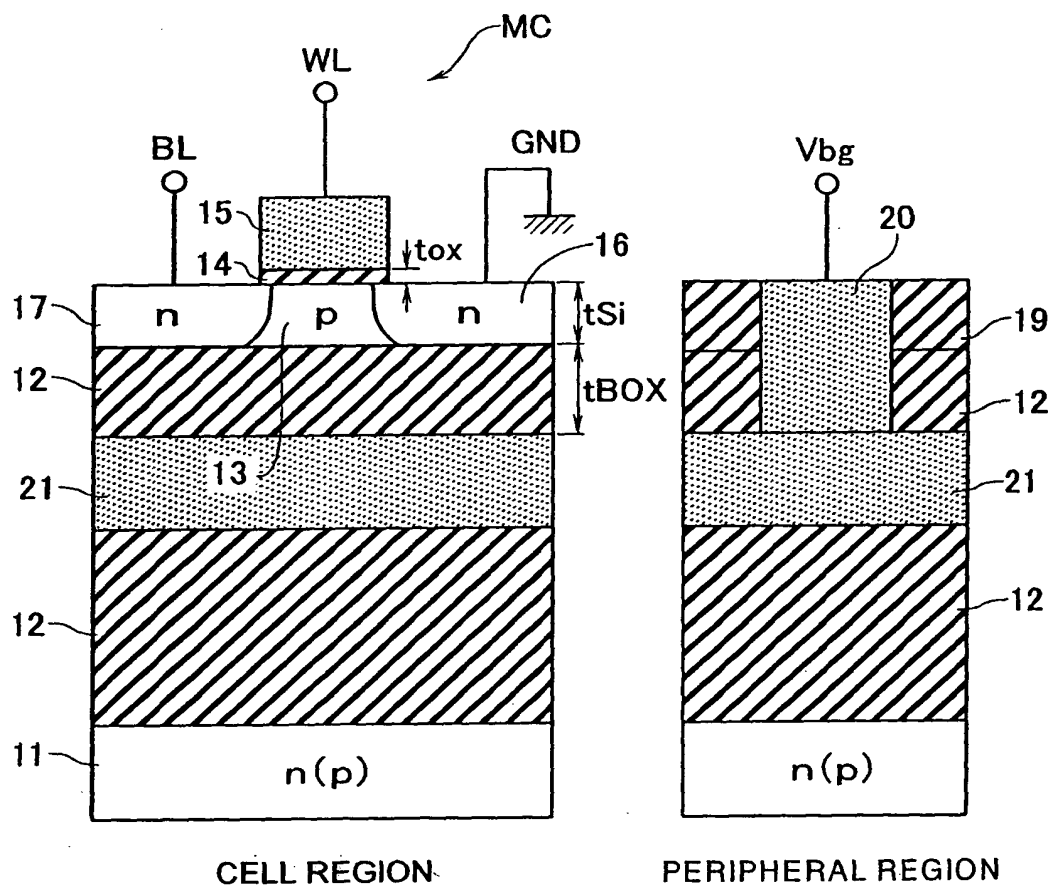


FIG. 13A

FIG. 13B

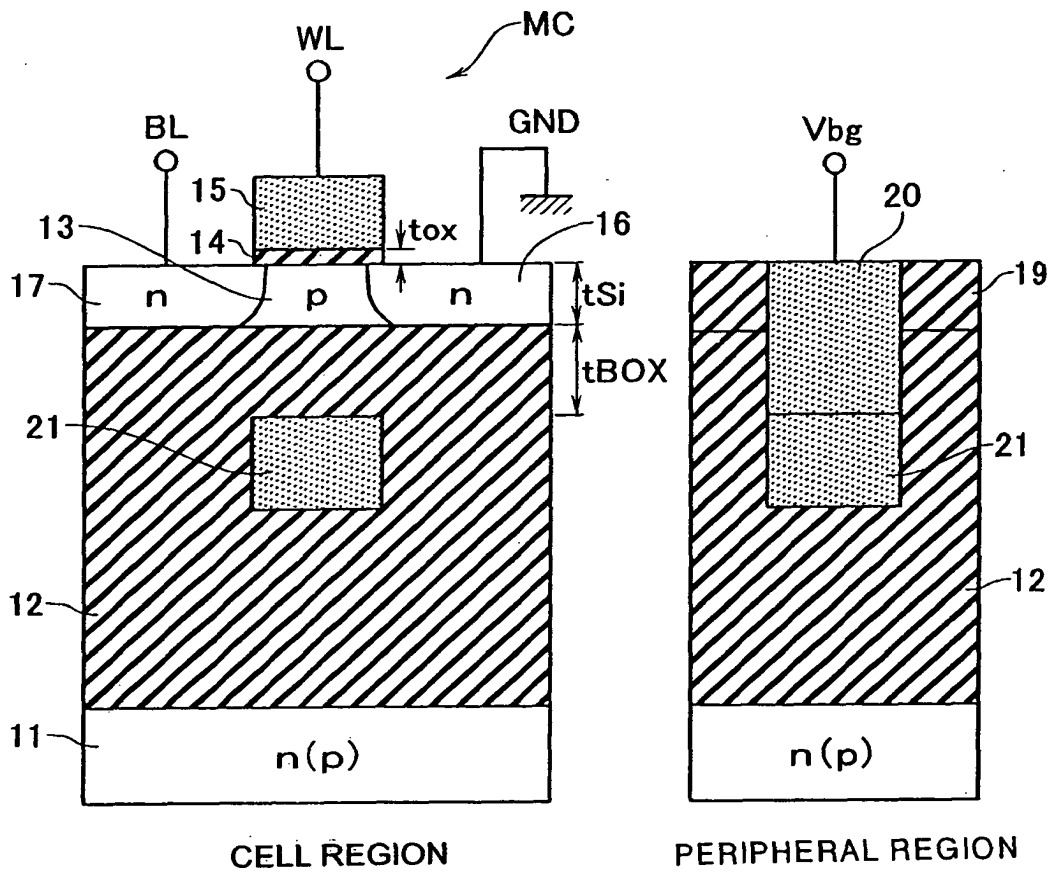


FIG. 14A

FIG. 14B

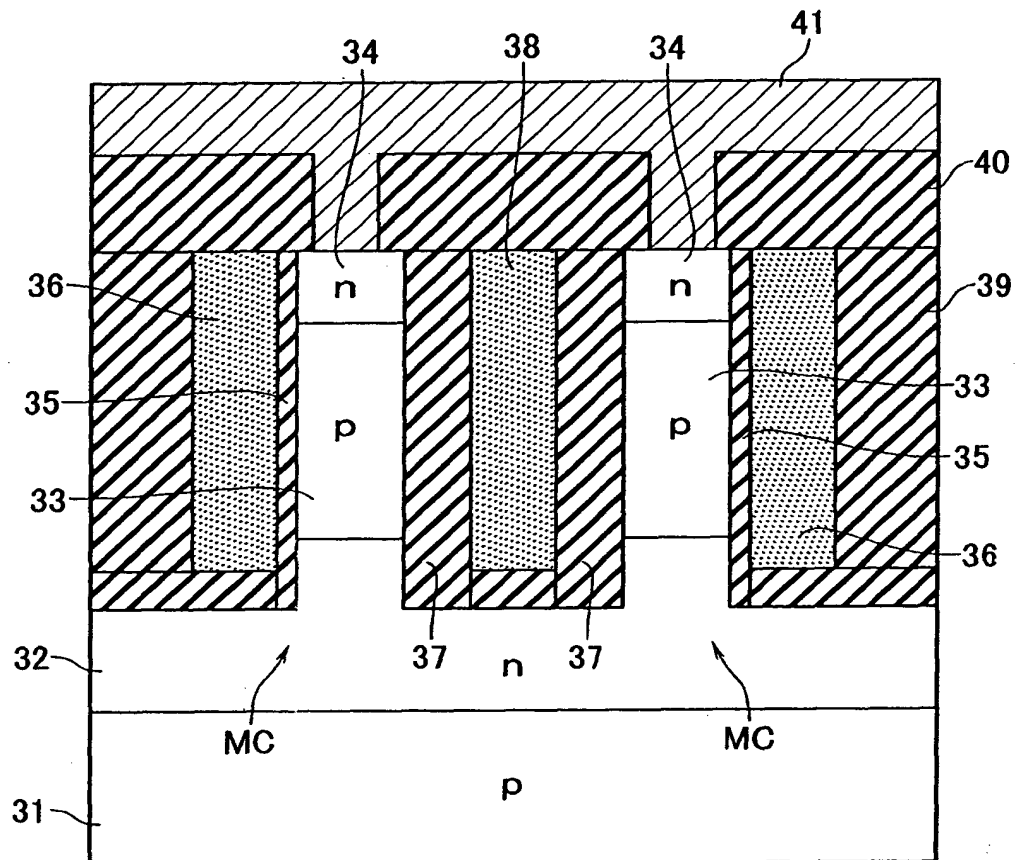


FIG. 15

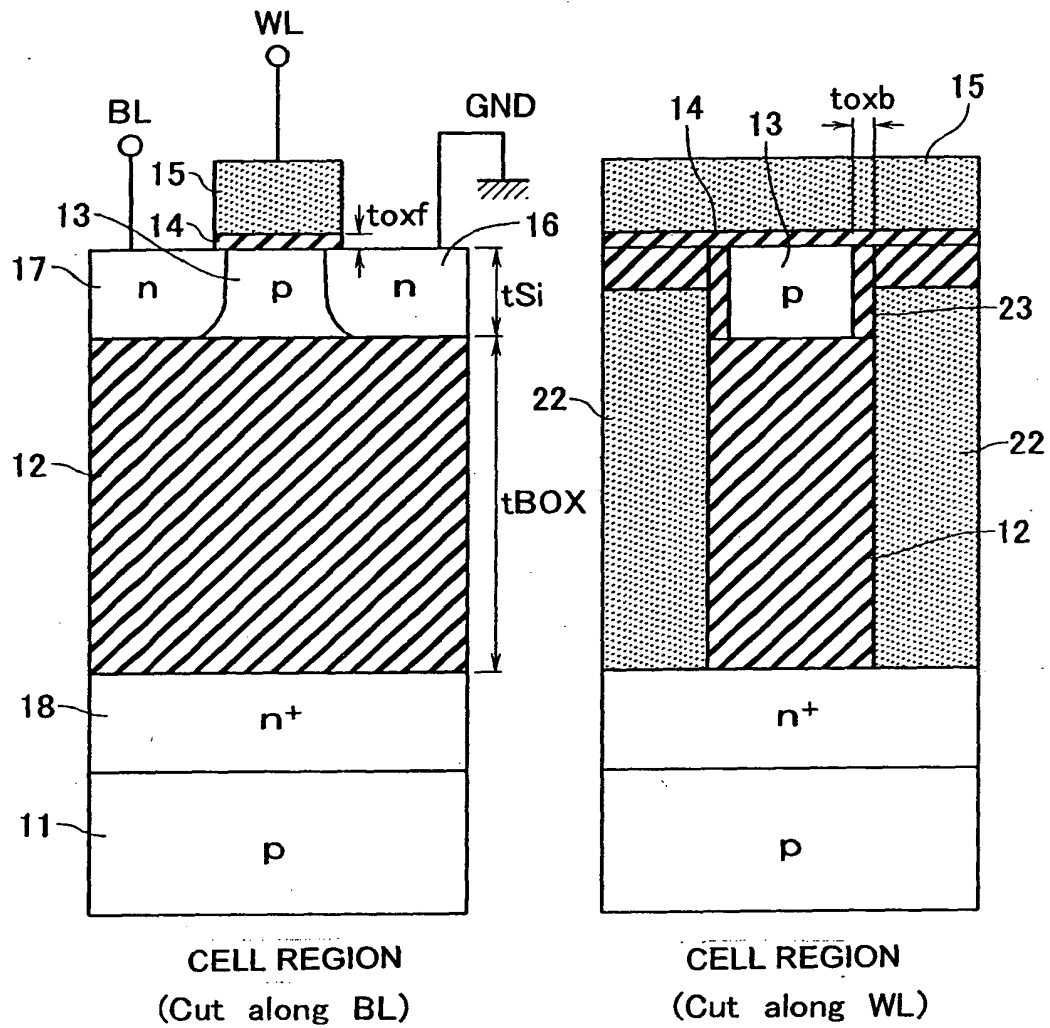


FIG. 16A

FIG. 16B

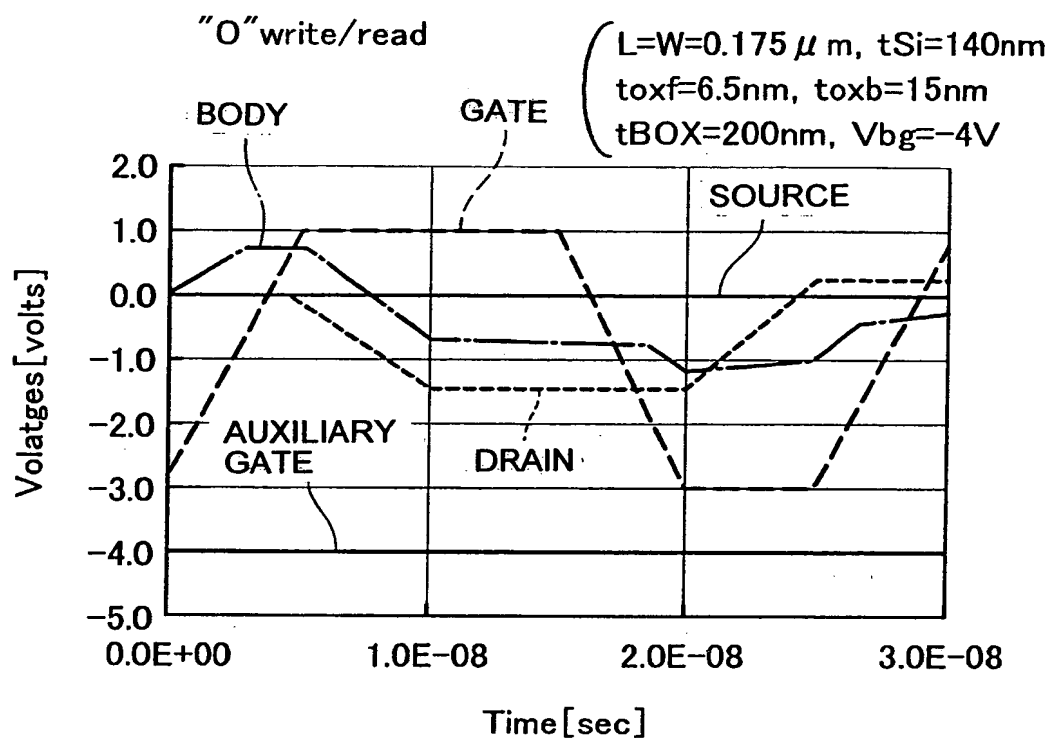


FIG. 17

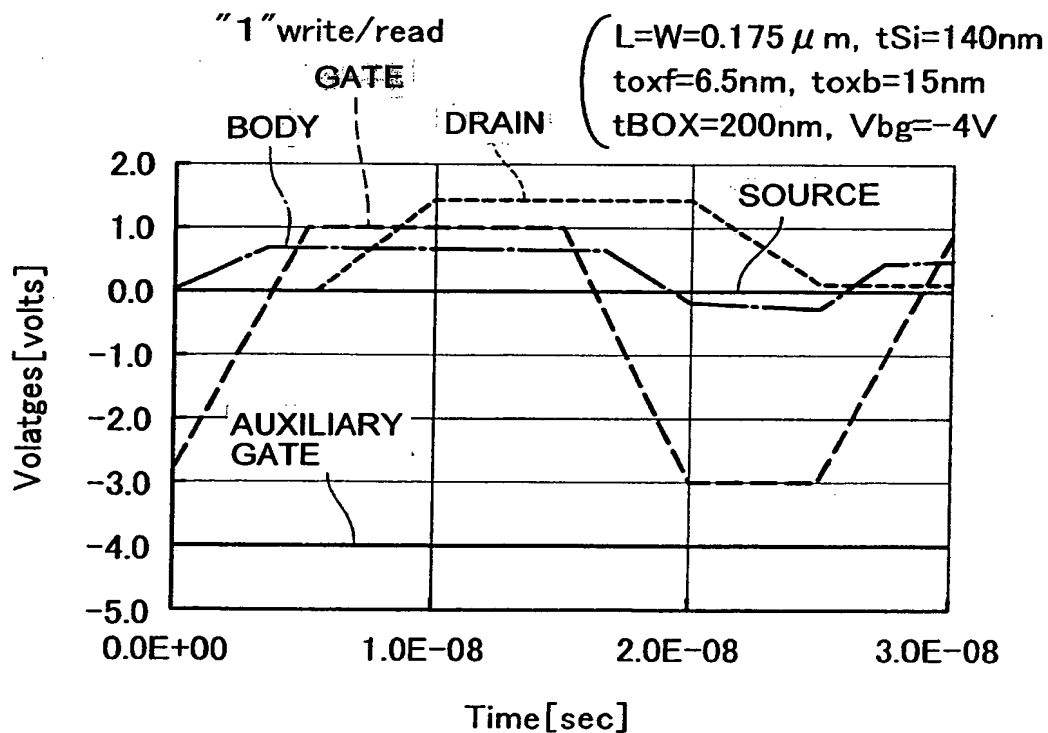


FIG. 18

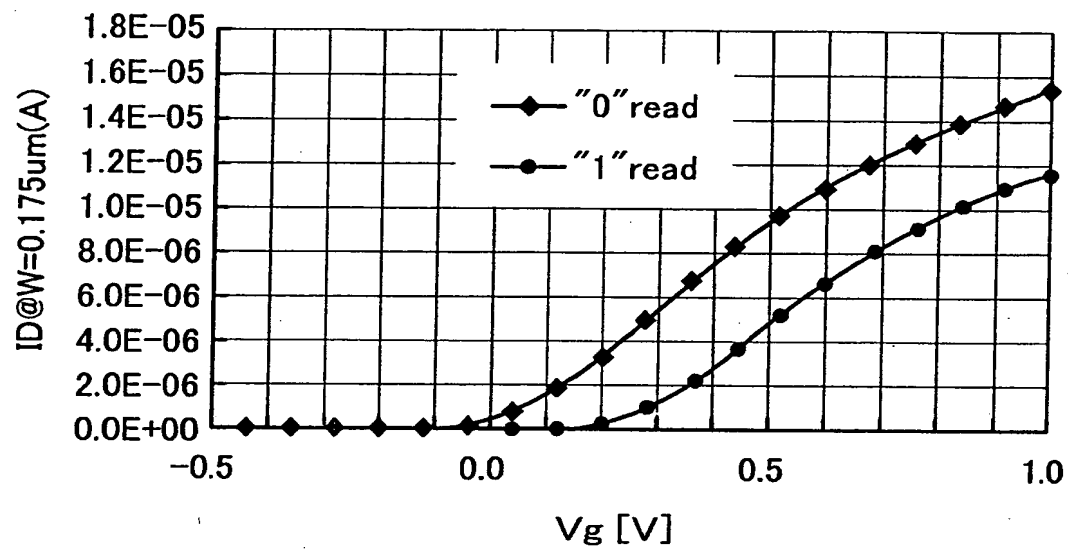


FIG. 19

$t_{ox}=10\text{nm}$ ,  $t_{BOX}=30\text{nm}$ ,  $t_{Si}=25\text{nm}$ ,  
 $NA=n_i=1.0e10\text{cm}^{-3}$  @300K, p+poly gate

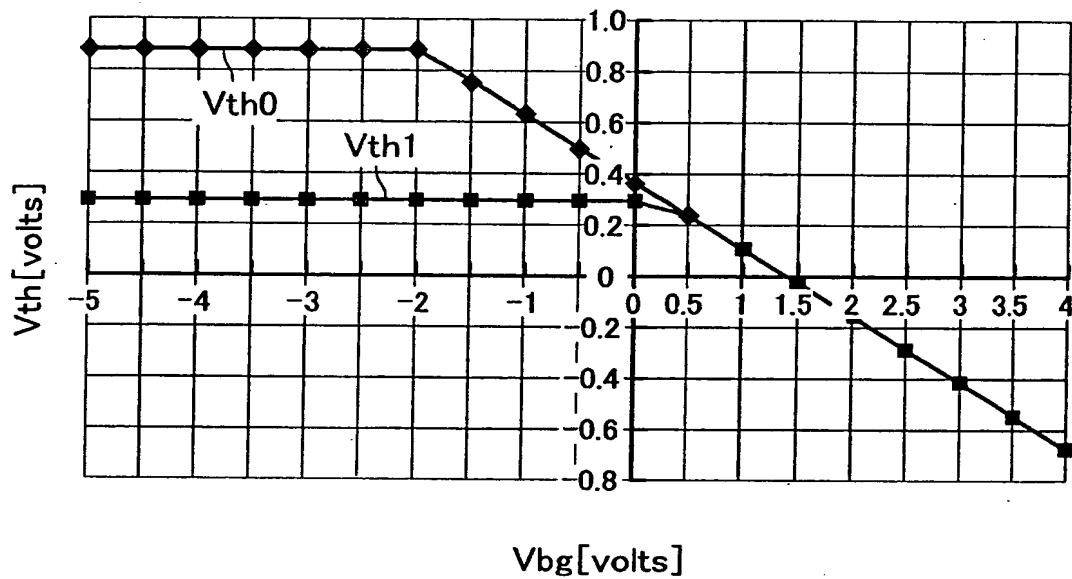


FIG. 20A

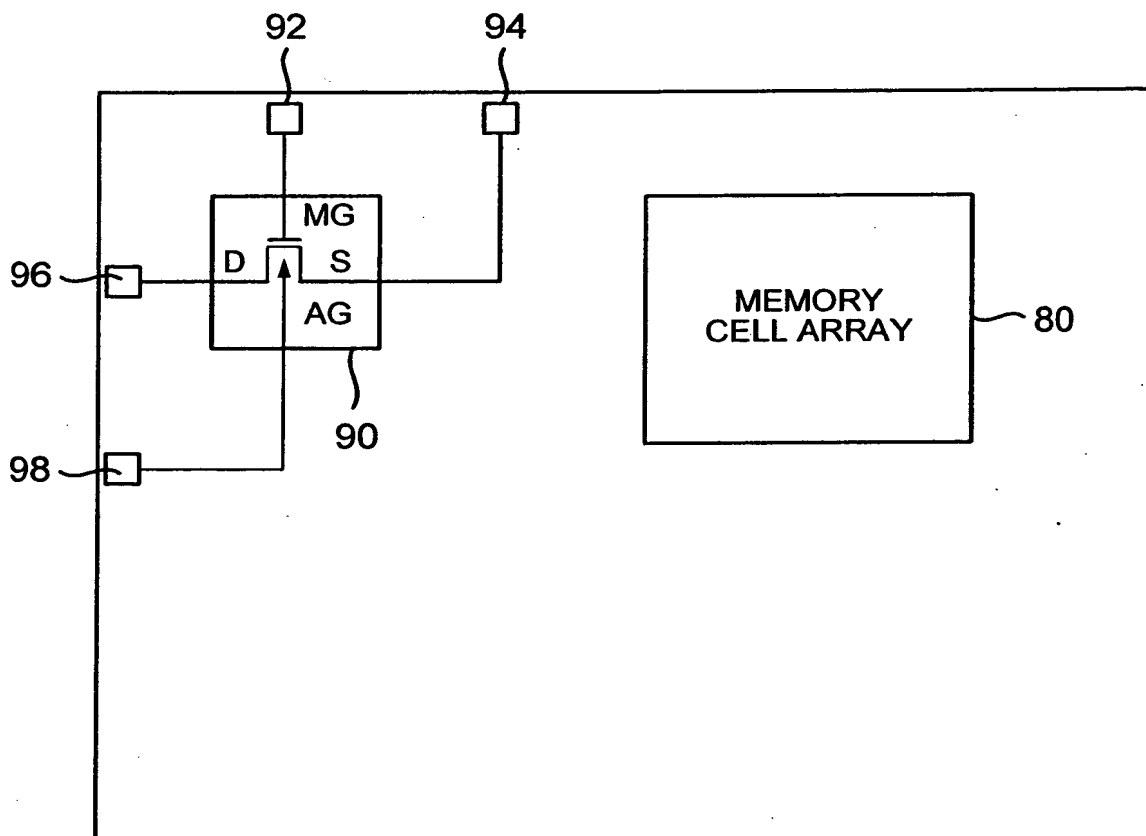
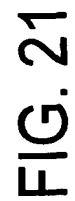


FIG. 20B



**FIG. 21**



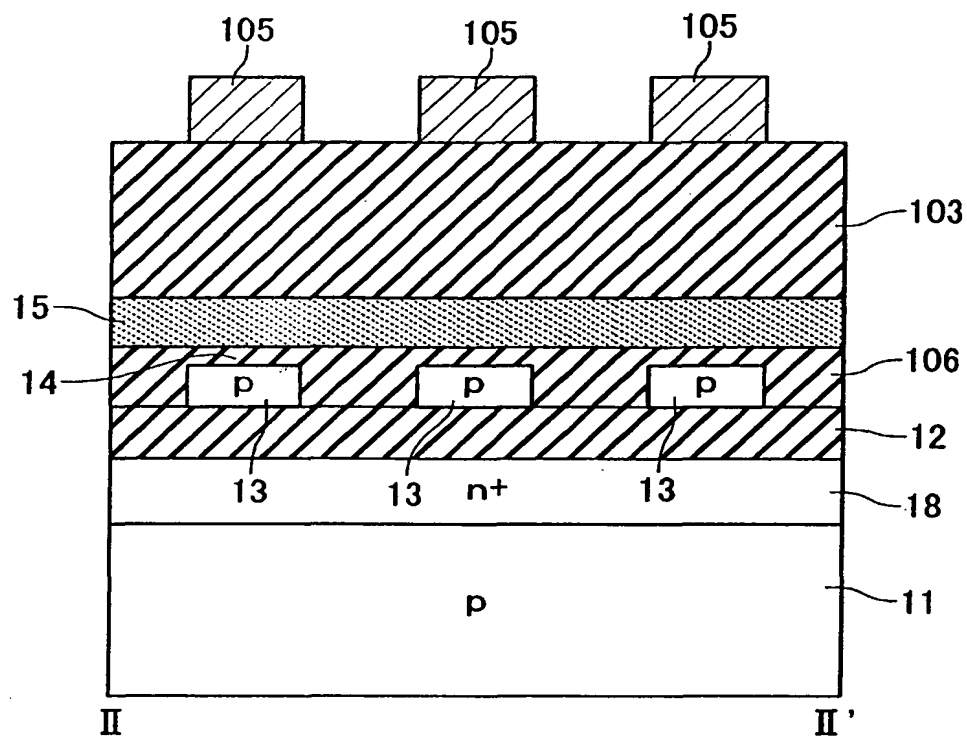


FIG. 23

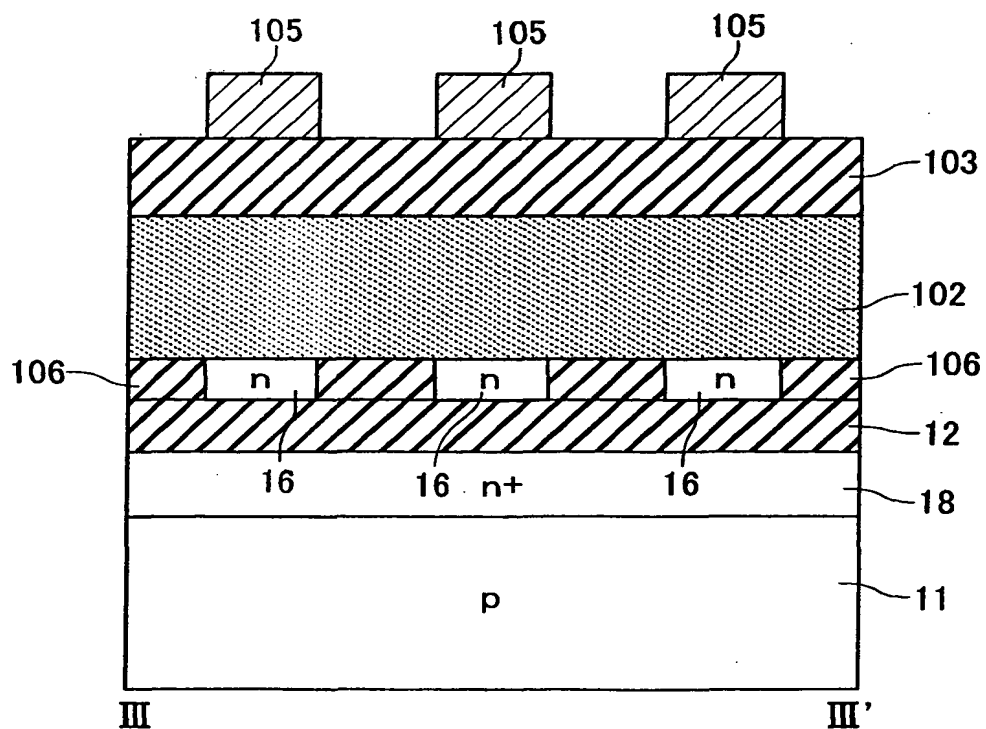


FIG. 24



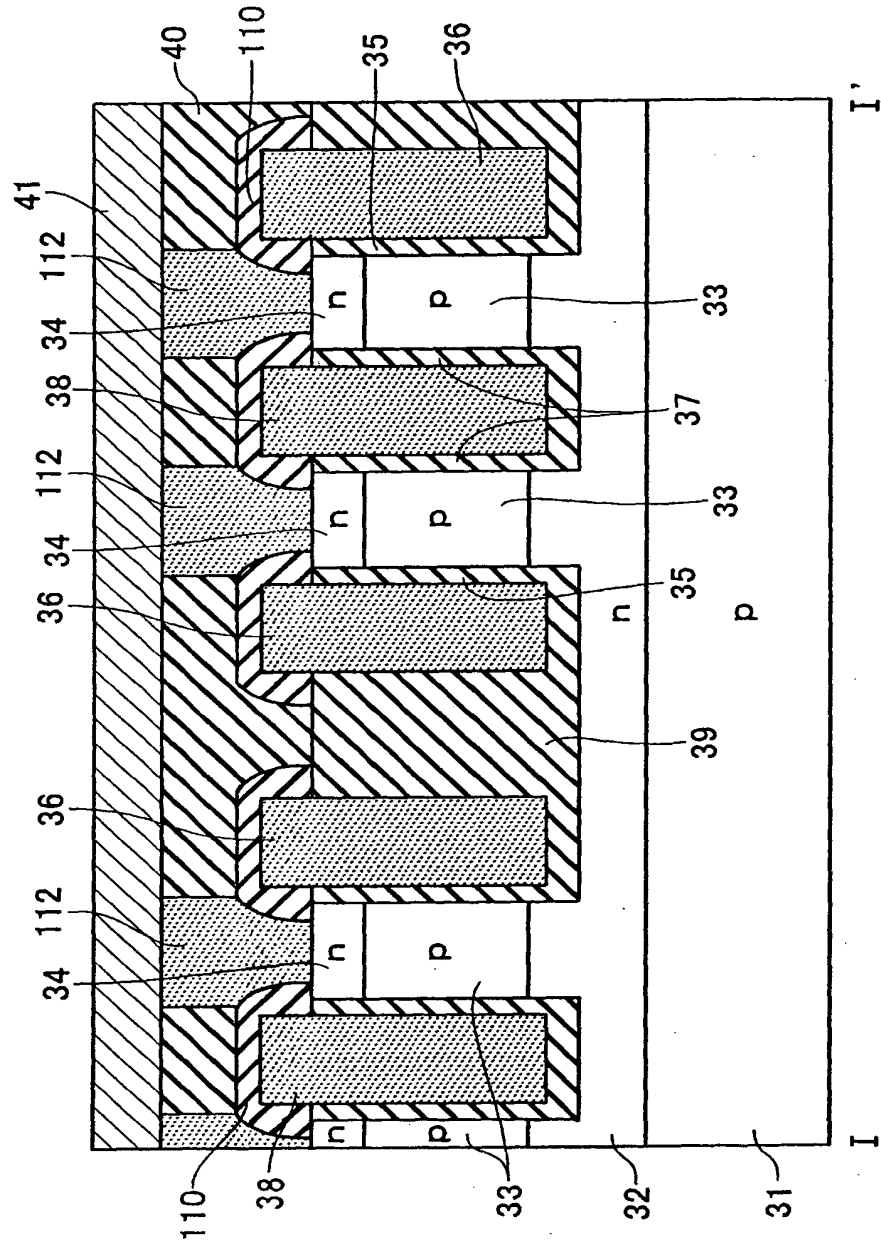


FIG. 26

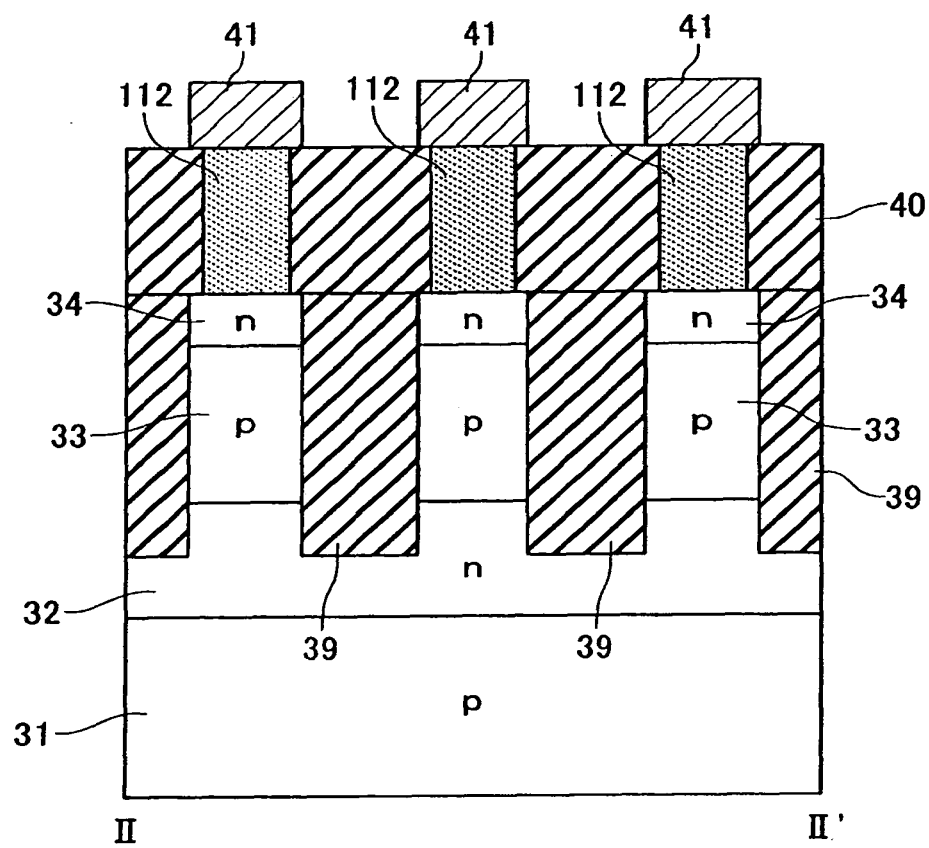


FIG. 27

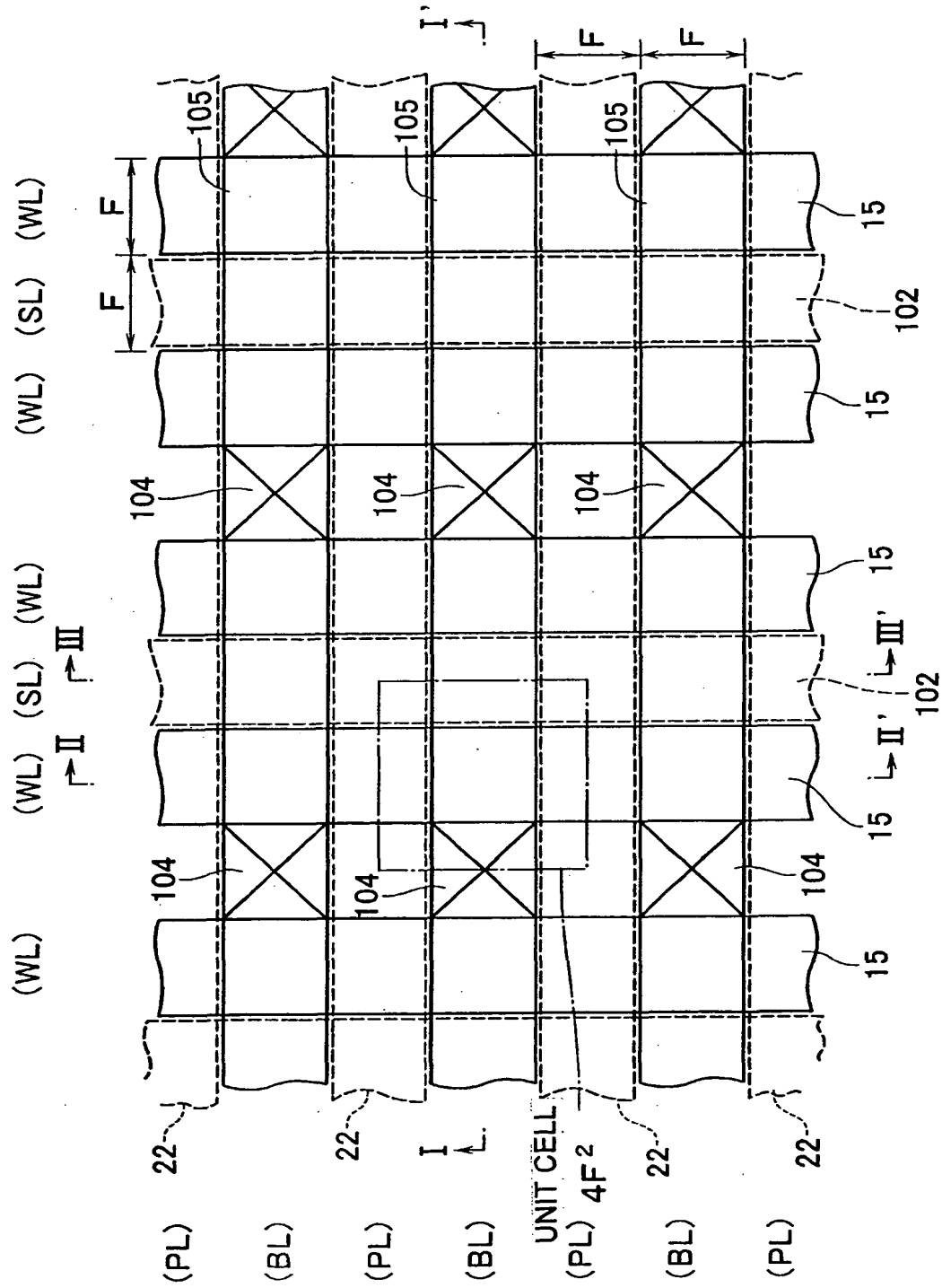


FIG. 28



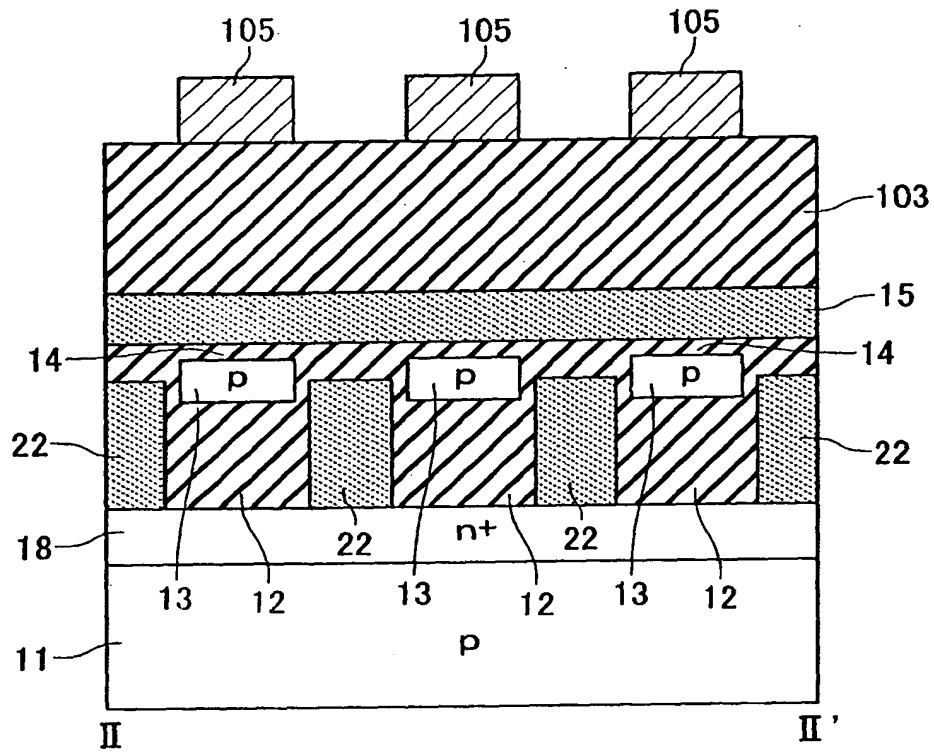


FIG. 30

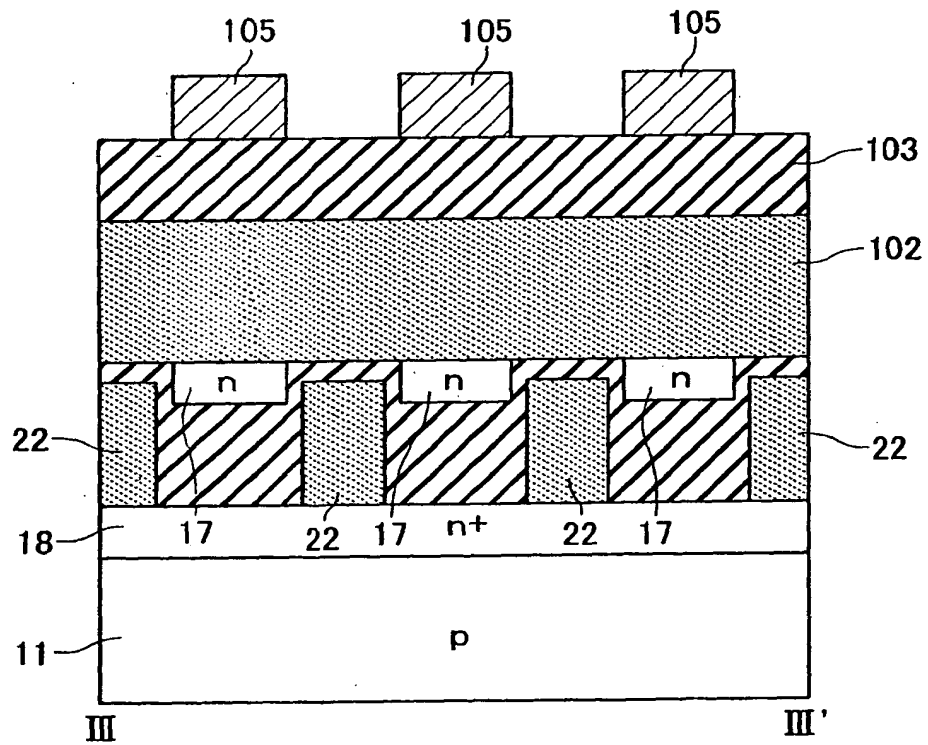


FIG. 31

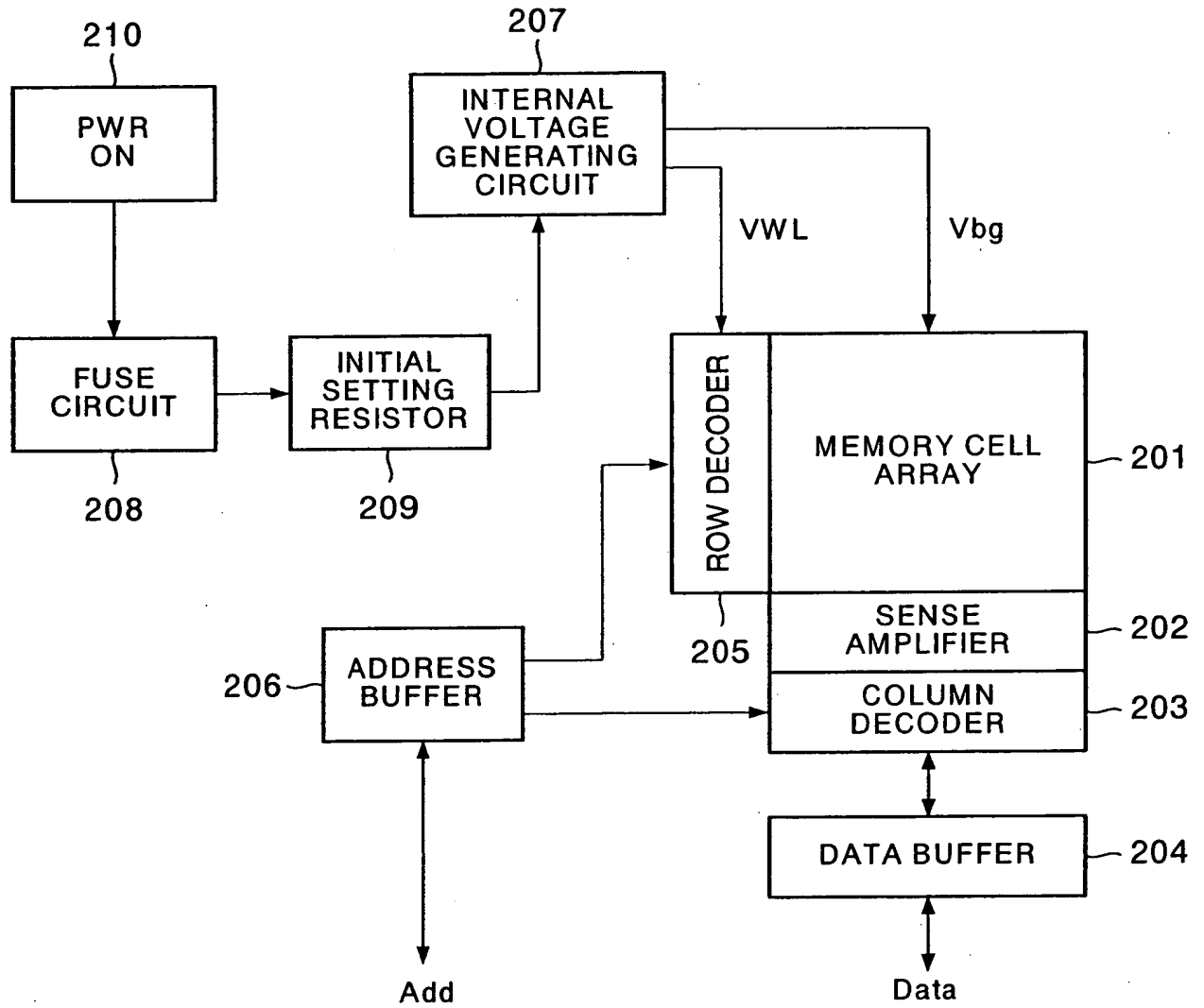


FIG. 32